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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/604,444	07/22/2003	Steven John Monks	P00888	1443
3017	7590	08/23/2005	EXAMINER	
BARLOW, JOSEPHS & HOLMES, LTD. 101 DYER STREET 5TH FLOOR PROVIDENCE, RI 02903			CLEMENT, MICHELLE RENEE	
			ART UNIT	PAPER NUMBER
			3641	

DATE MAILED: 08/23/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/604,444

Applicant(s)

MONKS ET AL.

Examiner

Michelle (Shelley) Clement

Art Unit

3641

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 10 June 2005.  
2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.  
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1,3 and 5-24 is/are pending in the application.  
4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.  
5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.  
6) ☒ Claim(s) 1,3 and 5-24 is/are rejected.  
7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.  
8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.  
10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)  
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)  
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.  
4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_.  
5) ☐ Notice of Informal Patent Application (PTO-152)  
6) ☐ Other: \_\_\_\_\_.

## **DETAILED ACTION**

### ***Response to Arguments***

1. Applicant's arguments with respect to claims 1, 3, and 5-11 have been considered but are moot in view of the new ground(s) of rejection as necessitated by applicant's amendments.

2. Applicant's arguments filed 6/10/05 with respect to the remaining claims have been fully considered but they are not persuasive. It is generally noted that independent claim 12 does not require the non-contact sensor to be an optical sensor or the trigger to have a prong. With regards to the Stevens reference, the device of Stevens shows a prong in Figures 19 and 20, the fact that it is not identical to the prong (34) as disclosed in applicant's figure 4A of the present application is irrelevant. The claims merely require a prong, which is shown by the Stevens reference. It is further noted that an optical micro switches operates in the same way as applicant's "optical sensor": it includes a light emitter and a light detector, the optical sensor, or optical micro switch, senses a break in passage of light between the light emitter and the light detector. It is further noted that there is no contact between the trigger and the light detector and light emitter. With regards to applicant's argument's concerning the Thanasack reference it is noted that applicant is arguing outside the scope of the claims. It is irrelevant that the gun of Thanasack does not fire projectiles, or that there is no need to sense whether a projectile is position properly before beginning the firing sequence in that applicant has not claimed these features. Applicant's acquiescence is noted with regards to the Surawski reference since applicant merely reiterates the arguments with regards to the teaching references of Stevens and Thanasack (see above).

***Claim Rejections - 35 USC § 102 & § 103***

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1, 3, and 7 rejected under 35 U.S.C. 103(a) as being unpatentable over Austin (US Patent # 4,757,629) and Lee (US Patent # 5,133,030). Austin discloses an electronic grip frame that could be used for a paintball marker, comprising, a frame (reference 15), a trigger (reference 20) movably connected to the frame the trigger being movable between a resting position and a firing position, the trigger having a finger contact side and a rear side opposite thereof. An electrical output capable of generating electrical signals indicative of the trigger position (column 4) is initiated by the trigger interrupting a light beam (column 5, lines 25-30). Although Austin does not expressly disclose the structure of the trigger for interrupting the light beam, Lee does. Lee teaches a trigger which can be used to interrupt a light beam, and which is used as a switch for an electrical output. The trigger having a prong portion (reference 62s) emanating from a rear side of the trigger and a means for biasing the trigger into a resting position (reference 68). Austin and Lee are analogous art because they are from similar problem solving areas: light-interrupting triggers.

6. Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Austin and Lee as applied to claim 1 above. Austin and Lee disclose the claimed invention except for the frame and trigger made of metal. It would have been obvious to one of ordinary skill in the art at the time the invention was made to make the frame and trigger of metal, since it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use as a matter of obvious design choice. *In re Leshin*, 125 USPQ 416.

7. Claims 5, 6 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Austin and Lee as applied to claim 1 above, and further in view of Kidd (US Patent # 5,294,231). Although neither Austin nor Lee expressly disclose the grip frame or trigger comprising adjustable stops to limit positioning of the trigger relative to the frame, Kidd does. Kidd teaches that it is well known in the art to include adjustable stops (reference 64) to limit various positions of triggers and it is well known in the art for triggers to be pivotally connected to the frame. Kidd, Lee and Austin are analogous art because they are from the same field of endeavor: triggers. It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the adjustable stops as taught by Kidd with the grip as taught by Austin and Lee. The suggestion/motivation for doing so would have been to obtain a trigger in which the length of pull and return could be controlled as is well known in the art.

8. Claims 7 and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Austin and Lee as applied to claim 1 above, and further in view of Surawski et al. (US Patent # 4,793,085). Although neither Austin nor Lee expressly disclose the means for biasing comprising a ferrous set screw mounted in the trigger and a magnet attached to the frame,

Art Unit: 3641

Surawski et al. does. Surawski et al. teaches a grip and trigger wherein the trigger is biased into a resting position by magnet force between the trigger and frame. Surawski et al., Austin and Lee are analogous art because they are from the same field of endeavor: triggers. It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the biasing means as taught by Surawski et al. with the trigger and grip frame as taught by Austin and Lee.

9. Claims 11-16 and 23 are rejected under 35 U.S.C. 102(b) as being anticipated by Stevens (U.S. 6,109,252). The reference discloses a paintball firing apparatus comprising a frame (item 72), a electronic grip (item 83), a movable trigger (item 90) connected to said frame, said trigger including an optical sensor (items 92, 94) interface for sensing the condition of the said trigger position (see for example, Column 3, lines 3-10), electrical output circuit (item 93) with a plurality signals connected to the said sensors with a first signal sensing the presence of a paintball within the breach (item 76) of the said firing apparatus, and a second signal the condition of the firing mechanism (item 90), and a signal controlling a motor (item 10) as generally disclosed in Column 5, lines 47-57, Column 6, lines 53+, Column 7, lines 1-9, , the reference discloses a gas source of supply to the said firing mechanism (Column 1, lines 7-23), the reference discloses a prong on the rear face of the said trigger as shown in Figures 19, 20, the reference discloses optical sensors (items 92, 94, and as disclosed in Column 3, lines 3-10) for operating and controlling the said electrical circuit (item 93), the reference discloses the said trigger pivotally connected to the said frame as shown in Figures 19-20.

10. Claims 12 are rejected under 35 U.S.C. 102(b) as being anticipated by

Art Unit: 3641

Thanasack et al (U.S. 6, 171,190). The reference discloses a gun firing apparatus comprising a frame (item 14) and trigger (item 26) connected to a photo-sensor (item 24), the operating of the said trigger resulting a first trigger signal and second signal to an internal circuit as disclosed in Column 5, lines 3835, and a computer system as disclosed in items 12, 30, and Column 5, lines 50+.

11. Claims 12, 17-21, 23 to 24 rejected under 35 U.S.C. 103(a) as being unpatentable over Surawski et al (U.S. 4,793,085) in view of Stevens (U.S. 6,109,252) and Thanasack et al (U.S. 6,171, 190). The primary reference discloses an electronic firing system that reads on the applicant's cited claims, comprising a frame (item 10), a hand grip (item 20), a trigger (item 14), movably connected to said frame and pivoted upon pin (item 50), a trigger switch circuit (Column 4, lines 33+, Column 5, lines 1-25) causing a plurality of electrical signals to actuate a solenoid (item 1 14) and producing a rearward movement of an armature winding (item 1 14a), the reference discloses a sear (item 78) and a solenoid connected thereto (item 1 14), the reference discloses a trigger mechanism encompassing the feature being claimed in the form of adjustable stop by means of the trigger bar (item 48) providing for a plurality of stop positions (see Figure 3), a biasing magnet (item 80), a set screw (item 50) and as disclosed in Column 3, lines 7-63), the reference discloses a metal construction by stating brazing manufacture (Column 2, lines 59+). The primary reference discloses the claimed invention except for citing that the trigger sensors are of the optical type and that the system uses a microprocessor to actuate a gas system to propel the paintballs. The secondary references teach that it is well known in the firearm art to use optical type trigger sensors and microprocessors to actuate a gas system to propel the paint-balls. It would have been obvious to one of ordinary skill in the art to have

Art Unit: 3641

substituted the Surawski et al sensors with optical type sensors as Stevens teaches that these are recognized equivalents as stated in Stevens (Column 3, lines 3-10), and in addition the use of micro-processors to actuate gas propelling systems is taught by Thanasack et al. as disclosed in items 12, and 30 in order to provide a processing means for processing electrical signals from photo-sensitive devices (see Column 3, lines 31-44).

### *Conclusion*

12. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Taylor (US Patent # 6,694,963), Gabrel (US Patent # 6,772,746), Power (US Patent # 6,772,548), and Hatcher (US Patent # 6,802,305).

13. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.



Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michelle (Shelley) Clement whose telephone number is 571.272.6884. The examiner can normally be reached on Monday thru Thursday 9-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Carone can be reached on 571.272.6873. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

A handwritten signature in black ink, appearing to read "M. Clement", with a stylized flourish extending from the end.